XXXIX. *Observations of the Sun's Eclipse,* 16th *of* August, 1765, *taken at* Caën *in* Normandy. *By* Nathanael Pigott, *Esquire, of* Whitton, *in* Middlesex. *Communicated by* J. Bevis, *M. D. F. R. S.*

Tr. Time.

h	′	″			′	″	‴
At 3	57	28	the feg. of the fun's illum. diam. meaf.		29	38	14
4	8	52	the diftance of the horns	ditto	14	47	37
4	18	39	the feg. of the illuminated diam.	ditto	27	4	35
4	24	28	the diftance of the horns	ditto	16	20	24
4	35	47	the feg. of the illuminated diam.	ditto	27	14	14
4	43	4	the diftance of the horns	ditto	14	26	6
4	52	38	the feg. of the illuminated diam.	ditto	29	52	1
4	56	54	the diftance of the horns	ditto	7	46	4

	h	′	″	′	″	‴	
Sun's incl. diam. meaf.	at 3	19	38	31	45	11	the mean
—— Ditto ——	at 3	22	10	31	42	58	′ ″ ‴
Sun's horiz. diam. aft. the Eclipfe	at 5	31	33	31	41	29	31 43 20
Sun's inclined diam. meaf. Auguft 15th	at 3	53	37	31	43	42	of the Sun's diam. meaf.

Eclipfe

	h	ı	ıı			h	ı	ı)

Eclipfe beg. tr. time at 3 48 16 ⎫ hence the mid. ⎫ 4 24 36
⟶ end. at 5 0 56½ ⎪ was at ⎬
⟶ mid. at 4 24 36 ⎬ and greateft ⎫ 4 18 39
⟶ dur. at 1 12 40½ ⎪ phafe obf. at ⎭ ——————
                   ⎭ whence the ⎫ 5 57 of
                    ecl. incr. for ⎭

time, in which the Sun's diam. illum. decreafed 36″ 14‴; there-

fore from the Sun's diam. illuminated at 4 18 39 = 27 4 35
    take the decreafe in   + 5 57 = 0 36 14
                                 ——————————

the diam. of the Sun at the middle   4 24 36 = 26 28 21

which taken from the mean diam. meaf. ⎫
   31′ 43″ 20‴ gives   ⎬   5 14 59
the quantity of the eclipfe, or fegment of the diameter eclipfed, which is 1 digit and 59′,15 of a digit, or $1 \frac{59}{60}$ = 2 digits nearly. This eclipfe was obferved with an achromatic refractor of 6 feet, and a micrometer made by Dollond. The weather very fine.

    The times, as computed from the Tables at the end of
                 M. De la Lande's Aftronomy.

	h	ı	ıı		h	ı	ıı	difference.	
								ı	ıı
Beginning at	3	48	24,6	obferv. at	3	48	16	0	8,6
Middle	4	25	11,0	⟶	4	24	36	0	35,0
End	5	1	57,2	⟶	5	0	56,5	1	0,7
Duration	1	13	32,6	⟶	1	12	40,5	0	52,1

Alfo the latitude of the Moon was, by obfervation, 16″ greater than the tables gave it.